IN THE CLAIMS:

Amendments to the Claims

Please cancel claims 5, 6 and 11 without prejudice or disclaimer of the subject matter thereof, and please amend the claims as shown below

Listing of Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (currently amended) An observing tool comprising a structure, for use of storing an observation target ~~storage section having a mirror~~, that is used in an observing method which observes an observation target, by illuminating the target with vertical lighting via an optical system having an objective lens, wherein

said structure has a depressed area to hold the observation target together with a solution, and

a bottom of said depressed area is provided with a reflection plane to reflect said vertical lighting when the observation is performed.

2. (currently amended) An observing tool ~~used for~~ comprising a structure allowing an illumination light to pass through, for use of storing an observation target, that is used in an observing method which observes an observation target, by illuminating the target with vertical lighting via an optical system having an objective lens~~, comprising an~~, wherein

said structure has a depressed area to hold the observation target together with a solution, and

a surface different from a surface having said depressed area is provided with a reflection plane ~~which reflects~~ to reflect said vertical lighting when ~~the~~ an observation is performed.

3. (currently amended) ~~The~~ An observing tool ~~according to claim 2~~ comprising a first structure allowing an illumination light to pass through, for use of storing an observation target, that is used in an observing method which observes an observation target, by illuminating the target with vertical lighting via an optical system having an objective lens, wherein,

said observing tool has a second structure,

said first structure has a depressed area to hold the observation target together with a solution,

said second structure is provided with a reflection plane ~~is provided on a surface to be facing to the objective lens when the observation~~ to reflect said vertical lighting when an observation is performed, and

a surface of said first structure, different from a surface on which said depressed area is provided, is superimposed on the reflection plane of said second structure.

4. (currently amended) ~~The~~ An observing tool ~~according to claim 2, wherein,~~

~~said reflection plane is provided on a surface opposite to the surface that is to be facing to the objective lens when the observation is performed~~ comprising a first structure allowing an illumination light to pass through, for use of storing an observation target, that is used in an observing method which observes an observation target, by illuminating the target with vertical lighting via an optical system having an objective lens, wherein,

said observing tool has a second structure to allow said vertical lighting to pass through,

said first structure has a depressed area to hold the observation target together with a solution,

said second structure is provided with a reflection plane to reflect said vertical lighting when an observation is performed, and

a surface of said first structure, different from a surface on which said depressed area is provided, is superimposed on the reflection plane of said second structure.

Claims 5 and 6 (canceled)

7. (currently amended) An observing method which ~~observes~~ utilizes an observing tool comprising a structure, for use of storing an observation target, and observes the observation target by illuminating the target with vertical lighting via an optical system having an objective lens, wherein,

said observation target is a micro transparent object,

~~an observing tool which stores said~~ said structure has a depressed area to hold the observation target together with a solution,

a bottom of said depressed area is provided with a reflection plane to reflect said vertical lighting when observation is performed, and

said ~~observation target is stored in said observing tool and said observation target is~~ micro transparent object disposed in a specific distance from said reflection plane is observed by use of said observing tool.

8. (currently amended) ~~The~~ An observing method ~~according to claim 7~~ which utilizes an observing tool comprising a structure allowing an illumination light to pass through, for use of storing an observation target, and observes the observation target by illuminating the target with a vertical lighting via an optical system having an objective lens, wherein,

~~said reflection plane is provided on a surface to be facing to the objective lens when the observation is performed~~ said observation target is a micro transparent object,

said structure has a depressed area to hold the observation target together with a solution,

a bottom of said depressed area is provided with a reflection plane to reflect said vertical lighting when observation is performed, and

said micro transparent object disposed in a specific distance from said reflection plane is observed by use of said observing tool.

9. (currently amended) ~~The~~ An observing method ~~according to claim 7~~ which utilizes an observing tool comprising a first structure allowing an illumination light to pass through, for use of storing an observation target, and observes the observation target by illuminating the target with a vertical lighting via an optical system having an objective lens, wherein,

~~said reflection plane is provided on a surface opposite to the surface that is to be facing to the objective lens when the observation is performed~~ said observation target is a micro transparent object,

said observing tool has a second structure,

said first structure has a depressed area to hold the observation target together with a solution,

said second structure is provided with a reflection plane to reflect said vertical lighting when observation is performed,

a surface of said first structure, different from a surface on which said depressed area is provided, is superimposed on the reflection plane of said second structure, and

said micro transparent object disposed in a specific distance from said reflection plane is observed by use of said observing tool.

10. (currently amended) ~~The~~ An observing method ~~according to any one of claims 7 to 9~~ which utilizes an observing tool comprising a first structure allowing an illumination light to pass through, for use of storing an observation target, and observes the observation target by illuminating the target with a vertical lighting via an optical system having an objective lens, wherein,

said observation target is a micro transparent object,

said observing tool has a second structure to allow said vertical lighting to pass through,

said first structure has a depressed area to hold the observation target together with a solution,

said second structure is provided with a reflection plane to reflect said vertical lighting when observation is performed,

a surface of said first structure, different from a surface on which said depressed area is provided, is superimposed on the reflection plane of said second structure, and

said micro transparent object disposed in a specific distance from said reflection plane is observed by use of said observing tool.

Claim 11 (canceled)

12. (currently amended) The observing method according to claim ~~11~~ 7, wherein,

said observation target is a cell, and

said liquid is a culture solution.

13. (currently amended) The observing method according to ~~any one of claims~~ claim 7 ~~to 12~~, wherein,

said observation target is stored in said observing tool so that a distance between said observation target and said reflection plane becomes a half or less than the focal depth of said optical system.

14. (currently amended) The observing method according to ~~any one of claims~~ Claim 7 ~~to 13~~, wherein,

said observation target is stored in said observing tool so that distance *d* between the observation target and the reflection plane satisfies the following formula (1),

$$d \leq W/(2NA^2) \ldots (1)$$

(in the formula, *d* represents the distance between the observation target and the reflection plane, *W* represents a wavelength of the light employed in the observation, and *NA* represents a numerical aperture of the optical system).

15. (currently amended) The observing method according to ~~any one of claims~~ Claim 7 ~~to 14~~, wherein,

said observation target is stored in said observing tool so that the numerical aperture of the illumination light against the observation target becomes smaller than the numerical apertures of the objective lens.

16. (currently amended) The observing method according to ~~any one of claims~~ Claim 7 ~~to 15~~, wherein,

said observation target is stored in said observing tool so that distance *d* between the observation target and the reflection plane satisfies the following formula (2),

$$d > F/(4\tan(\sin^{-1}NA)) \quad \ldots (2)$$

(in the formula, *d* represents the distance between the observation target and the reflection plane, *F* represents a visual field diameter of the optical system, and *NA* represents a numerical aperture of the optical system.)